

# 04/08/2021



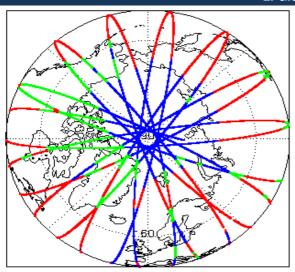
# 1. Overview

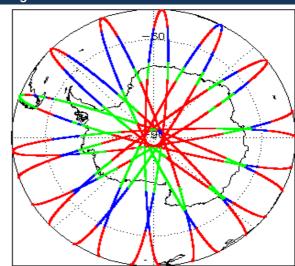
Report Production Date:	18-Oct-2021				
Processor Used:	CryoSat Ice Processor				
Data Used:	L1B and L2 OFFLINE Data				

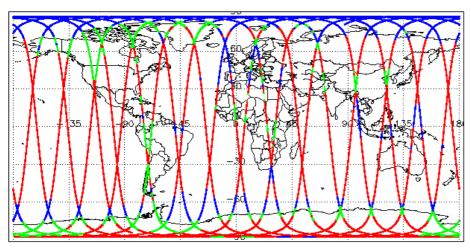
Check	Status		
Server check: science-pds.cryosat.esa.int	Nominal		
Server check: calval-pds.cryosat.esa.int	Nominal		
Product Software Check	Nominal		
Product Format Check	Nominal		
Product Header Analysis	Nominal		
Star Tracker Usage Check	Nominal		
L1B Tracking Flag Check	See Section 4.4		
L1B Calibration Usage Check	Nominal		
L1B & L2 Auxiliary Data File Usage Check	Nominal		
L1B & L2 Auxiliary Correction Error Check	Nominal		
L1B & L2 Measurement Confidence Data Check	See Section 4.8 and 5.5		
QCC Errors/ Warnings	See Section 6.1, 6.2 and 6.3		

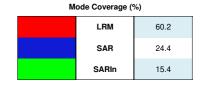
I	Mission / Instrument News					
	03-Aug-2021	None				
۱	04-Aug-2021	None				
	05-Aug-2021	Nothing planned				

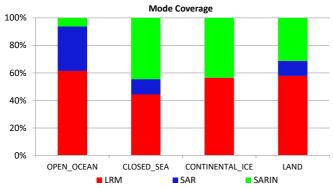
# 2. Global Coverage

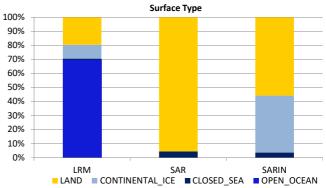












# 3. Instrument Configuration

The SIRAL instrument configuration for the day of acquisition is provided below.

SIRAL instrument(s) in use:

SIRAL - A

# 4. Level 1B Data Quality Check

## 4.1 L1B Product Format Check

Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (.HDR) and a product file (.DBL).

Number of products with errors:

(

## 4.2 L1B Product Header Analysis

For all products, a series of pre-defined checks are carried out on the MPH and SPH in order to identify any inconsistencies and/or errors raised by the ground-segment processing chain.

Number of products with errors:

.

## 4.3 Star Tracker Usage Check

Each product is checked in order to ensure a valid star tracker file has been used in processing.

Number of products with errors:

.

## 4.4 L1B Tracking Flags Check

CryoSat L1B data includes a tracking flag for each measurement record. The bit value of this flag indicates any problems when set.

Loss of Echo Flag: This flag is currently set for some products over land, but this is to be expected.

Number of products with errors: 10

Loss of echo	The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records
Loss of echo	The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records
Loss of echo	The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records
Loss of echo	The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records
Loss of echo	The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records
Loss of echo	The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records
Loss of echo	The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records
Loss of echo	The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records The tracking echo is missing for one or more records
Loss of echo	The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records
Loss of echo	The tracking echo is missing for one or more records  The tracking echo is missing for one or more records  The tracking echo is missing for one or more records
Loss of echo Loss of echo Loss of echo Loss of echo	The tracking echo is missing for one or more records  The tracking echo is missing for one or more records
Loss of echo Loss of echo	The tracking echo is missing for one or more records
Loss of echo	
Loss of echo	The tracking echo is missing for one or more records
oss of echo	The tracking echo is missing for one or more records
2000 01 00110	The tracking echo is missing for one or more records
Loss of echo	The tracking echo is missing for one or more records
_oss of echo	The tracking echo is missing for one or more records
_oss of echo	The tracking echo is missing for one or more records
_oss of echo	The tracking echo is missing for one or more records
_oss of echo	The tracking echo is missing for one or more records
_oss of echo	The tracking echo is missing for one or more records
Loss of echo	The tracking echo is missing for one or more records
_oss of echo	The tracking echo is missing for one or more records
_oss of echo	The tracking echo is missing for one or more records
_oss of echo	The tracking echo is missing for one or more records
_oss of echo	The tracking echo is missing for one or more records
_oss of echo	The tracking echo is missing for one or more records
Loss of echo	The tracking echo is missing for one or more records
_oss of echo	The tracking echo is missing for one or more records
Loss of echo	The tracking echo is missing for one or more records
_oss of echo	The tracking echo is missing for one or more records
_oss of echo	The tracking echo is missing for one or more records
_oss of echo	The tracking echo is missing for one or more records
_oss of echo	The tracking echo is missing for one or more records
Loss of echo	The tracking echo is missing for one or more records
Loss of echo	The tracking echo is missing for one or more records
Loss of echo	The tracking echo is missing for one or more records
Loss of echo	The tracking echo is missing for one or more records
Loss of echo	The tracking echo is missing for one or more records
Loss of echo	The tracking echo is missing for one or more records
	oss of echo

CS_OFFL_SIR_LRM_1B_20210804T093625_20210804T093629_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T093632_20210804T093632_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T093635_20210804T093636_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T093641_20210804T093644_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T093648_20210804T093709_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T102422_20210804T102543_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T102545_20210804T102548_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T102550_20210804T102553_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T102555_20210804T102555_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T102931_20210804T103005_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T103010_20210804T103020_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T103031_20210804T103054_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T103057_20210804T103105_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T103109_20210804T103151_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T103153_20210804T103821_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T105040_20210804T112548_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T112922_20210804T113130_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T113157_20210804T113731_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T120921_20210804T121429_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T121551_20210804T121600_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T122905_20210804T122952_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T123653_20210804T123705_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T123710_20210804T123730_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T123736_20210804T123758_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T123800_20210804T123803_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T123805_20210804T130437_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T132052_20210804T133946_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T133948_20210804T134829_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T134832_20210804T134833_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T134836_20210804T135112_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T135145_20210804T135842_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T150718_20210804T151500_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T151626_20210804T152143_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T152327_20210804T152457_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T152714_20210804T152821_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T152834_20210804T152929_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T152931_20210804T152947_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T152947_20210804T153056_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T170003_20210804T170455_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T170528_20210804T170708_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T172624_20210804T174854_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T174936_20210804T180126_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T181004_20210804T181400_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T190443_20210804T191926_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T192407_20210804T192527_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T192529_20210804T192828_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T192856_20210804T194101_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T195923_20210804T201223_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T201437_20210804T203217_D001	oss of echo	The tracking echo is missing for one or more records
		The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T205401_20210804T210427_D001	oss of echo	The tracking echo is missing for one or more records
		The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T213927_20210804T214147_D001	oss of echo	The tracking echo is missing for one or more records
CS_OFFL_SIR_LRM_1B_20210804T214442_20210804T214827_D001	oss of echo	The tracking echo is missing for one or more records
		The tracking echo is missing for one or more records
		The tracking echo is missing for one or more records
		The tracking echo is missing for one or more records
		The tracking echo is missing for one or more records
		The tracking echo is missing for one or more records
		The tracking echo is missing for one or more records
		The tracking echo is missing for one or more records
		The tracking echo is missing for one or more records
		The tracking echo is missing for one or more records
	oss of echo	The tracking echo is missing for one or more records
	oss of echo	The tracking echo is missing for one or more records

Each product is checked in order to ensure that the necessary calibration files have been used in processing

Number of products with errors:

### 4.6 L1B Auxilary Data File Usage Check

Each product is checked for missing Data Set Descriptors with respect to a pre-determined baseline and also to check the validity of Auxiliary Data Files is correct.

Number of products with errors:

#### U

#### 4.7 L1B Auxiliary Correction Error Check

CryoSat L1B data includes a correction error flag (field 54) for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors:

#### 4.8 L1B Measurement Confidence Data Check

CryoSat L1B data includes a measurement confidence flag (field 18) for each measurement record. The bit value of this flag indicates any problems when set.

Currently, there are several common error flags raised in the Level 1B products which are expected due to operational mode or surface type. All common flags are summarised in the list below, followed by a table of any additional issues arising from this test.

Block Degraded Flag: This flag is currently set for a number of individual records generally at the start or end of products (all modes), but this is to be expected.

Phase Perturbation Flag: This flag is currently set for all L1B SARIn products, indicating that the ADC correction application is deactivated, but this is in line with the current configuration.

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_LRM_1B_20210804T222249_20210804T223137_D001	Echo error, TRK echo error	The tracking echo has returned an error and the Rx1 Echo Error flag is set, indicating a degraded echo

## 5. Level 2 Data Quality Check

#### 5.1 L2 Product Format Check

Each product, retrieved and unpacked from the science server, is checked to ensure it consists of both an XML header file (.HDR) and a product file (.DBL).

Number of products with errors:

## 5.2 L2 Product Header Analysis

For all products, a series of pre-defined checks are carried out on the MPH and SPH in order to identify any inconsistencies and/or errors raised by the ground-segment processing chain.

Number of products with errors:

## 5.3 L2 Auxiliary Data File Usage Check

Each product is checked for missing Data Set Descriptors with respect to a pre-determined baseline and also to check the validity of Auxiliary Data Files is correct.

Number of products with errors:

#### 0

## 5.4 L2 Auxiliary Correction Error Check

CryoSat L2 data includes a correction error flag (field 30) for each measurement record. The bit value of this flag indicates any problems when set.

Number of products with errors:

# 5.5 L2 Measurement Quality Flag Check

CryoSat L2 data includes a quality flag (field 50) for each 20-Hz measurement record. The bit value of this flag indicates any problems when set.

Currently, there are several common error flags raised in the Level 2 products which are expected due to operational mode or surface type. All common flags are summarised in the list below, followed by a table of any additional issues arising from this test.

Freeboard error: This flag is correctly set in all L2 SAR products that are not discriminated as sea-ice, and for which freeboard cannot be calculated.

Height and Backscatter errors: These flags are currently set for products over land, but this is to be expected. Retracker 1 Height and Backscatter error flags are also set for products over sea-ice, but this is to be expected.

Peakiness error: This flag is currently set for products over sea-ice, but this is to be expected.

SARIn X-Track Angle Error: This flag is set when the difference between the computed surface elevation and the DEM is >50 m. The DEM is only available over Greenland and Antarctica and as a result this flag is set for L2 SARIn products in all other locations as expected.

SSHA interpolation error: This flag is currently set for a number of SAR products occurring at surface type boundaries, but this is to be expected.

Number of products with errors:

Product	Test Failed	Description
CS_OFFL_SIR_LRM_2_20210804T000454_20210804T003046_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_2_20210804T003049_20210804T003237_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2_20210804T010228_20210804T012834_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2_20210804T014440_20210804T021823_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_2_20210804T023000_20210804T023716_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_2_20210804T024254_20210804T025022_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210804T030345_20210804T030744_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records

confirmation for the process of the		Height Error (Retracker 2), Backscatter	There is a height and backscatter error for Retracker 2 for one or more
COLORS, BRILLING 2, 2010004T00400, 2010004T00400, D010004T00400, D010004T00400, 2010004T00400, 20100040T00400, 20100040T04000, 20100040T00400, 20100040T00400, 20100040T00400, 20100040T04	CS_OFFL_SIR_LRM_220210804T032455_20210804T040043_D001	Error (Retracker 2)	records
CQ-GPT_SPT_UPV2021004T00000_0010040104000_0010  CRITER_SPT_UPV2021004T00000_00100400_00100400000000000000	CS_OFFL_SIR_LRM_220210804T040937_20210804T041142_D001	(Retracker 3), Backscatter Error	Retracker 3 and no DEM or Slope Model was used for the location of one
COLOFFE, SR. LINU 2 - SET INSTITUTION DESCRIPTION AND STATE OF THE PROPERTY OF THE SET INSTITUTION OF THE SET INST	CS_OFFL_SIR_LRM_220210804T043000_20210804T044558_D001	(Retracker 3), Backscatter Error	
Negli Eco (Pascardo I)  Negli Eco (Pascardo II)  Negli	CS_OFFL_SIR_LRM_220210804T050327_20210804T053856_D001		· ·
CB_DPFL_SRIP_INV2_2001004198193_20110941106092_D001  Register for (Residue's Early Entry Residue)  Register (2)  Register (3)  Register (3)  Register (3)  Register (3)  Register (3)  Register (4)  R	CS_OFFL_SIR_LRM_220210804T054857_20210804T055048_D001		
Ex. OFFL_SRI_RIM_2_representations records and a height error processor of the seconds are records.  SEC. OFFIL. SRI_LIMA_2_reprised for the second of the second and a height error processor.  SEC. OFFIL. SRI_LIMA_2_reprised for the second of the second of the second of the second are records.  There is a height and bedocated error for Retanded 2 and a height error processor.  SEC. OFFIL. SRI_LIMA_2_reprised for the second of the se	CS_OFFL_SIR_LRM_220210804T060105_20210804T060531_D001	(Retracker 3), Backscatter Error	
CS_OFFL_SRI_LEM_2_per10841795093_200198041705919_D001  CS_OFFL_SRI_LEM_2_per10841795093_200198041705919_D001  CS_OFFL_SRI_LEM_2_per108417975018_Z00198041705919_D001  CS_OFFL_SRI_LEM_2_per108417975018_Z00198041705919_D001  CS_OFFL_SRI_LEM_2_per10841795018_Z00198041705919_D001  CS_OFFL_S	CS_OFFL_SIR_LRM_220210804T060622_20210804T062359_D001		
CS_OFFL_SIN_LIM_2_2001004170940_2010041719910_D001  Pricesore 2, Backscatter Ford Pricesore 2, B	CS_OFFL_SIR_LRM_220210804T064315_20210804T065719_D001	(Retracker 3), Backscatter Error	
CS_OFFL_SIR_LRM_2_2001004T07012_001004T074918_D001  Highli Error (Retacker 2), Service model showed by the service of the serv	CS_OFFL_SIR_LRM_220210804T065839_20210804T065949_D001	(Retracker 3), Backscatter Error	
CS_OFFL_SIR_LEM_2_2021084T073112_20210804T080489_D001  Perioduce 29, Bedoscenter Emror Professional Size one or more records  Seglis Enric (Retracted 2), Neight Emror (Retracted 2) Residenter enror or professional size of the control of the contr	CS_OFFL_SIR_LRM_220210804T070430_20210804T071901_D001	Error (Retracker 2), Surface model	
CS_OFFL_SIR_LEM_2_20210804T08201_2021084T08048_0001  Represeder 3, Backscatter Error (Retracted 2),	CS_OFFL_SIR_LRM_220210804T073112_20210804T074918_D001	(Retracker 3), Backscatter Error	
Error (Retracker 2). Backscatter   Ferror (Retracker 2). Backscatt	CS_OFFL_SIR_LRM_220210804T075048_20210804T080449_D001	(Retracker 3), Backscatter Error	
Enror (Retracker 2)  Report For (Retracker 3)  Report For (Retracker 3	CS_OFFL_SIR_LRM_220210804T082211_20210804T083659_D001		
Error (Retracker 2) records  CS_OFFL_SIR_LRM_2_20210804T085106_20210804T085839_D001  Surface Model Unavailable  No DEM or Slope Model was used for the location of one or more records  Height Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker	CS_OFFL_SIR_LRM_220210804T083900_20210804T084118_D001		
CS_OFFL_SIR_LRM_2_20210804T09905_20210804T09329_D001  Retracker 3), Backscatter Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 3), Bac	CS_OFFL_SIR_LRM_220210804T084120_20210804T084823_D001		_
(Retracker 3), Backscatter Error (Retracker 2) and a height error (Retracker 2) and a height error (Retracker 3), Backscatter Error (Retracker 3), Eachscatter Error (Retracker 3), Backscatter Error (Retracker 3), Eachscatter Error (Retracker 3), Backscatter Error (Retracker 3), Eachscatter Error (Retracker 2), Eachscatter Error (Retracker 3), Eachscatter Error	CS_OFFL_SIR_LRM_220210804T085106_20210804T085839_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_2_20210804T105040_20210804T112548_D001  CS_OFFL_SIR_LRM_2_20210804T114211_20210804T120517_D001  CS_OFFL_SIR_LRM_2_20210804T114211_20210804T120517_D001  CS_OFFL_SIR_LRM_2_20210804T114211_20210804T120517_D001  CS_OFFL_SIR_LRM_2_20210804T1121838_20210804T121845_D001  CS_OFFL_SIR_LRM_2_20210804T121838_20210804T121835_D001  CS_OFFL_SIR_LRM_2_20210804T123055_20210804T130437_D001  CS_OFFL_SIR_LRM_2_20210804T133055_20210804T130437_D001  CS_OFFL_SIR_LRM_2_20210804T133055_20210804T130437_D001  CS_OFFL_SIR_LRM_2_20210804T133055_20210804T130437_D001  CS_OFFL_SIR_LRM_2_20210804T133055_20210804T130482_D001  CS_OFFL_SIR_LRM_2_20210804T13055_20210804T133346_D001  CS_OFFL_SIR_LRM_2_20210804T13055_20210804T133346_D001  CS_OFFL_SIR_LRM_2_20210804T13055_20210804T133545_D001  CS_OFFL_SIR_LRM_2_20210804T13055_20210804T133545_D001  CS_OFFL_SIR_LRM_2_20210804T13055_20210804T135542_D001  CS_OFFL_SIR_LRM_2_20210804T13055_20210804T135542_D001  CS_OFFL_SIR_LRM_2_20210804T135545_D0010804T135542_D001  CS_OFFL_SIR_LRM_2_20210804T135545_D0010804T135542_D001  CS_OFFL_SIR_LRM_2_20210804T135507_20210804T135542_D001  CS_OFFL_SIR_LRM_2_20210804T153507_20210804T153754_D001  Error (Retracker 2), Backscatter Error (Retracker 2) and a height error for Retracker 2 and a height error for Retracker 3) as a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records  There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records  There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records  There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records  There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records  There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records  There is a height and backscatter error for Retracker 2 and a	CS_OFFL_SIR_LRM_220210804T090905_20210804T092729_D001	(Retracker 3), Backscatter Error	
GS_OFFL_SIR_LRM_2_20210804T112548_D001  (Retracker 3), Backscatter Error (Retracker 3), Height Error (Retracker 3), Backscatter Error (Retracker 3) for one or more records  Height Error (Retracker 2), Height Error (Retracker 3) for one or more records  Height Error (Retracker 3), Backscatter Error (Retracker 3) for one or more records  Height Error (Retracker 2), Backscatter Error (Retracker 3), Backscatter Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 3), Height Error (Retracker 3), Backscatter Error (Retracker 3), Height Error (Retracker 3) for one or more records  ES_OFFL_SIR_LRM_2_20210804T133948_20210804T138942_D001  ES_OFFL_SIR_LRM_2_20210804T135145_20210804T138942_D001  ES_OFFL_SIR_LRM_2_20210804T135145_20210804T138942_D001  ES_OFFL_SIR_LRM_2_20210804T135145_20210804T135842_D001  ES_OFFL_SIR_LRM_2_20210804T135145_20210804T135954_D001  ES_OFFL_SIR_LRM_2_20210804T1351507_20210804T135954_D001  ES_OFFL_SIR_LRM_2_20210804T153507_20210804T153754_D001  ENGRETACKER 3), Backscatter Error (Retracker 2), Backscatter Error (Retracker 2), Height Error (Retracker 2), Backscatter Error (Retracker 2), Backscatter Error (Retracker 2), Backscatter  Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 3), Backscatter Error (Retracker 3), Backscatter Error (Retracker 2), Backscatter  Error (Retracker 2), Backscatter  Error (Retracker 2), Backscatter  Error (Retracker 2), Height Error (Retracker 2), Backscatter  Error (Retracker 3), Backscatter Error (Retracker 3), Backscatter Error (Retracker 3), Backscatter  Error (Retracker 3), Backscatter  Error (Retracker 2), Backscatter  Error (Retracker	CS_OFFL_SIR_LRM_220210804T093443_20210804T093620_D001	(Retracker 3), Backscatter Error	
CS_OFFL_SIR_LRM_2_20210804T1121845_D001  Retracker 3), Backscatter Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 3), Backscatter Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2), Backscatter Error (Retracker 3), Backscat	CS_OFFL_SIR_LRM_220210804T105040_20210804T112548_D001	(Retracker 3), Backscatter Error	
Error (Retracker 2)  Error (Retracker 2)  Error (Retracker 2)  Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 3 for one or more records  There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records  There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records  There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records  There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records  There is a height and backscatter error for Retracker 2 and a height error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error for Retracker 3 for one or more records  There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records  There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records  There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records  There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2, a height error (Retracker 2), Backscatter error for Retracker 2, a height error for Retracker 3, Backscatter error for Retracker 2, a height error for Retracker 3, Backscatter error for Retracker 3, Backscatter error for Retracker 2, a height error for Retracker 3, Backscatter error for Retracker 2, Surface model unavailable  There is a height and backsca	CS_OFFL_SIR_LRM_220210804T114211_20210804T120517_D001	(Retracker 3), Backscatter Error	
Retracker 3), Backscatter Error (Retracker 2) to Retracker 3 or one or more records  CS_OFFL_SIR_LRM_2_20210804T132052_20210804T133946_D001  CS_OFFL_SIR_LRM_2_20210804T133948_20210804T134829_D001  CS_OFFL_SIR_LRM_2_20210804T133948_20210804T134829_D001  CS_OFFL_SIR_LRM_2_20210804T135145_20210804T135842_D001  CS_OFFL_SIR_LRM_2_20210804T135145_20210804T135842_D001  CS_OFFL_SIR_LRM_2_20210804T135145_20210804T135842_D001  CS_OFFL_SIR_LRM_2_20210804T135145_20210804T135842_D001  CS_OFFL_SIR_LRM_2_20210804T141109_20210804T144226_D001  CS_OFFL_SIR_LRM_2_20210804T153507_20210804T153754_D001  CS_OFFL_SIR_LRM_2_20210804T153507_20210804T153754_D001  CS_OFFL_SIR_LRM_2_20210804T153507_20210804T162244_D001  CS_OFFL_SIR_LRM_2_20210804T15355_20210804T162244_D001  CS_OFFL_SIR_LRM_2_20210804T154955_20210804T162244_D001  CS_OFFL_SIR_LRM_2_20210804T154955_20210804T162244_D001  CS_OFFL_SIR_LRM_2_20210804T154955_20210804T162244_D001  CS_OFFL_SIR_LRM_2_20210804T154955_20210804T162244_D001  CS_OFFL_SIR_LRM_2_20210804T154955_20210804T162244_D001  CS_OFFL_SIR_LRM_2_20210804T154955_20210804T162244_D001  CS_OFFL_SIR_LRM_2_20210804T154955_20210804T165839_D001  CS_OFFL_SIR_LRM_2_20210804T164033_20210804T165839_D001  CS	CS_OFFL_SIR_LRM_220210804T121838_20210804T121845_D001		
CS_OFFL_SIR_LRM_2_20210804T132052_20210804T133946_D001  (Retracker 3), Backscatter Error (Retracker 2), Height Error (Retracker 3 for one or more records  CS_OFFL_SIR_LRM_2_20210804T133948_20210804T135842_D001  CS_OFFL_SIR_LRM_2_20210804T135145_20210804T135842_D001  CS_OFFL_SIR_LRM_2_20210804T135145_20210804T135842_D001  CS_OFFL_SIR_LRM_2_20210804T141109_20210804T144226_D001  CS_OFFL_SIR_LRM_2_20210804T141109_20210804T144226_D001  CS_OFFL_SIR_LRM_2_20210804T153507_20210804T153754_D001  CS_OFFL_SIR_LRM_2_20210804T153507_20210804T153754_D001  CS_OFFL_SIR_LRM_2_20210804T153507_20210804T162244_D001  CS_OFFL_SIR_LRM_2_20210804T154955_20210804T162244_D001  CS_OFFL_SIR_LRM_2_20210804T154955_20210804T162244_D001  CS_OFFL_SIR_LRM_2_20210804T154955_20210804T162244_D001  CS_OFFL_SIR_LRM_2_20210804T154955_20210804T162244_D001  CS_OFFL_SIR_LRM_2_20210804T154955_20210804T162244_D001  CS_OFFL_SIR_LRM_2_20210804T154955_20210804T162244_D001  CS_OFFL_SIR_LRM_2_20210804T154955_20210804T162244_D001  CS_OFFL_SIR_LRM_2_20210804T164033_20210804T165638_D001  CS_OFFL_SIR_LRM_2_20210804T164033_20210804T	CS_OFFL_SIR_LRM_220210804T123805_20210804T130437_D001	(Retracker 3), Backscatter Error	
CS_OFFL_SIR_LRM_2_20210804T133948_20210804T134829_D001  (Retracker 3), Backscatter Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2), Backscatter Error (Retracker 3), Backs	CS_OFFL_SIR_LRM_220210804T132052_20210804T133946_D001	(Retracker 3), Backscatter Error	
CS_OFFL_SIR_LRM_2_20210804T135145_20210804T135842_D001  (Retracker 3), Backscatter Error (Retracker 2)  Height Error (Retracker 2), Backscatter Error (Retracker 2), Backscatter Error (Retracker 2)  CS_OFFL_SIR_LRM_2_20210804T141109_20210804T144226_D001  Height Error (Retracker 2), Backscatter Error (Retracker 2), Backscatter Error (Retracker 2)  CS_OFFL_SIR_LRM_2_20210804T153507_20210804T153754_D001  Height Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2), Backscatter Error (Retracker 3), Backscatter Error (Retracker 2), Backscatter	CS_OFFL_SIR_LRM_220210804T133948_20210804T134829_D001	(Retracker 3), Backscatter Error	
Error (Retracker 2) records  CS_OFFL_SIR_LRM_2_20210804T153507_20210804T153754_D001  Height Error (Retracker 2), Backscatter Error (Retracker 2), Backscatter records  There is a height and backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2, a height error (Retracker 3), Backscatter Error (Retracker 3), Backscatter Error (Retracker 3), Backscatter Error (Retracker 2), Surface model unavailable  CS_OFFL_SIR_LRM_2_20210804T164033_20210804T165639_D001  Height Error (Retracker 2), Backscatter error for Retracker 2 for one or more records  There is a height and backscatter error for Retracker 2, a height error for Retracker 3, Backscatter Error (Retracker 2),	CS_OFFL_SIR_LRM_220210804T135145_20210804T135842_D001	(Retracker 3), Backscatter Error	
Error (Retracker 2)  Error (Retracker 2)  Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 3), Backscatter Error (Retracker 2), Surface model unavailable  CS_OFFL_SIR_LRM_2_20210804T154955_20210804T162244_D001  Error (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 3), Backscatter Error (Retracker 2), Surface model unavailable  From (Retracker 2), Height Error (Retracker 2), Height Error (Retracker 2), Backscatter Er	CS_OFFL_SIR_LRM_220210804T141109_20210804T144226_D001		
CS_OFFL_SIR_LRM_2_20210804T154955_20210804T162244_D001  (Retracker 3), Backscatter Error (Retracker 2), Surface model unavailable  CS_OFFL_SIR_LRM_2_20210804T164033_20210804T165639_D001  (Retracker 2), Backscatter  (Retracker 2), Backscatter  There is a height and backscatter error for Retracker 2 for one or more	CS_OFFL_SIR_LRM_220210804T153507_20210804T153754_D001		
	CS_OFFL_SIR_LRM_220210804T154955_20210804T162244_D001	(Retracker 3), Backscatter Error	Retracker 3 and no DEM or Slope Model was used for the location of one
	CS_OFFL_SIR_LRM_220210804T164033_20210804T165639_D001		

CS_OFFL_SIR_LRM_220210804T171439_20210804T171533_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210804T172624_20210804T174854_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210804T174936_20210804T180126_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210804T181903_20210804T184459_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210804T184514_20210804T185246_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220210804T190443_20210804T191926_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220210804T192407_20210804T192527_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210804T192529_20210804T192828_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210804T192856_20210804T194101_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210804T195923_20210804T201223_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210804T201437_20210804T203217_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220210804T204418_20210804T205038_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210804T205401_20210804T210427_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 and a height error for Retracker 3 for one or more records
CS_OFFL_SIR_LRM_220210804T210607_20210804T211956_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210804T213927_20210804T214147_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210804T214442_20210804T214827_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210804T215527_20210804T215815_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210804T215939_20210804T220649_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210804T220812_20210804T221022_D001	Height Error (Retracker 2), Height Error (Retracker 3), Backscatter Error (Retracker 2), Surface model unavailable	There is a height and backscatter error for Retracker 2, a height error for Retracker 3 and no DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210804T222249_20210804T223137_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records
CS_OFFL_SIR_LRM_220210804T223830_20210804T225831_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210804T231453_20210804T233707_D001	Height Error (Retracker 2), Backscatter Error (Retracker 2)	There is a height and backscatter error for Retracker 2 for one or more records
CS_OFFL_SIR_LRM_220210804T233712_20210804T234812_D001	Surface Model Unavailable	No DEM or Slope Model was used for the location of one or more records

# 6. QCC Report Analysis

The Quality Control for CryoSat (QCC) facility performs a primary survey of data products immediately after production by the PDS and LTA processing facilities. A list of the tests which raised errors or warnings is provided below.

Product type	No. Products	No. QCC Reports	No. Valid	No. Warnings	No. Errors
SIR_LRM_1B	157	157	157	0	0
SIR_SAR_1B	93	93	93	0	0
SIR_SIN_1B	103	103	103	0	0
SIR_LRM_2	157	157	151	6	0
SIR_SAR_2	103	93	93	0	0
SIR_SIN_2	93	103	99	4	0
SIR_GDR_2	15	15	0	0	15

# 6.1 QCC Errors

Number of products with QCC errors:

•	١	5	

	MPHDUTNCDF	MPHXPFNCDF	MPHXVFNCDF	MPHYPFNCDF	MPHYVFNCDF	MPHZPFNCDF	MPHZVFNCDF	STRUCTURESIZ	_	-	-
Product Type											
1 Todaot Type								EANDREAD			
								LANDIILAD			

SIR_GDR_2_ 1	5 15	15	15	15	15	15	15			
Test Description Key:										
Abbreviation	Test name		Details							
MPHDUTNCDF	MPH_Delta_UT1_NetCDF		Delta_UT1 mismat	ch						
MPHXPFNCDF	MPH_X_Position_Float_v2	_NetCDF	X_Position mismat	ch (DBL float (G	DR), rounded to 10	0)				
MPHXVFNCDF	MPH_X_Velocity_Float_v2	_NetCDF	X_Velocity mismat	ch (DBL float (G	DR), rounded to 1)					
MPHYPFNCDF	MPH_Y_Position_Float_v2	_NetCDF	Y_Position mismat	ch (DBL float (G	DR), rounded to 10	0)				
MPHYVFNCDF	MPH_Y_Velocity_Float_v2	Y_Velocity mismatch (DBL float (GDR), rounded to 1)								
MPHZPFNCDF	MPH_Z_Position_Float_v2	_NetCDF	Z_Position mismatch (DBL float (GDR), rounded to 100)							
MPHZVFNCDF	MPH_Z_Velocity_Float_v2	_NetCDF	Z_Velocity mismatch (DBL float (GDR), rounded to 1)							
STRUCTURESIZEANDE	STRUCTURE_SIZE_AND_	READ	Under investigation	1.						

# 6.2 QCC Warnings

Number of QCC reports with warnings

Total number of occurrences of each warming							
Product Type	AXDME	AXSMMEOCI	SPHRTASCNSNCDF	-	-		-
SIR_GDR_2_	0	0	1				
SIR LRM 2	0	6	0				

Test Description Key:						
Abbreviation	Test name	Details				
AXDME	AttributeXrefDemMustExist	The xref_dem attribute is mandatory in SIN products over continental ice				
AXSMMEOCI	AttributeXrefSlopeModelMustExistOverContinentalIce	The xref_slope_model is mandatory in LRM products over continental ice				
SPHRTASCNSNCDF	SPH_Rel_Time_ASC_Node_Start_v4_NetCDF	#N/A				

# 6.2 Missing QCC Reports

Number of products with missing QCC reports:

11

Product name
CS\_OFFL\_SIR\_GDR\_2\_20210804T215301\_20210804T233216\_D002